

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Per Martinsson, et al.
Serial No. : 10/608,630
For : WEAR LEVEL INDICATING FILAMENTS AND
FABRICS (AND GUIDELINE APPLICATIONS)
Filing Date : June 27, 2003
Examiner : Andrew T. Piziali
Group Art Unit : 1794
Confirmation No. : 8456

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APPEAL BRIEF OF APPELLANT UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF- PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal from the Final Office Action mailed July 10, 2009, which issued in the above-identified application, finally rejecting claims 1, 3, 14, 15, 17, 28, and 48, and from the Pre-Appeal Brief Conference Decision dated October 22, 2009. A Notice of Appeal was filed on September 24, 2009. The period for response to Notice of Appeal is November 24, 2009 and extendable under 37 CFR 1.136. Please charge any additional fees required for the Notice of Appeal, or otherwise occasioned by this paper or credit any overpayments to Deposit Account No. 50-0320.

REAL PARTY IN INTEREST

The real party in interest is Albany International Corp., 1373 Broadway, Albany, New York 12204, to which Appellant has assigned all interest in, to and under this application, by virtue of an assignment recorded on August 8, 2003 at reel 014382, frame 0299 of the assignment records of the Patent and Trademark Office.

RELATED APPEALS AND INTERFERENCES

Upon information and belief, the undersigned attorney does not believe that there is any appeal or interference that will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF THE CLAIMS

The Application was filed with claims 1-47 on June 27, 2003 and assigned Application Serial No. 10/608,630.

In a first Office Action dated March 11, 2005, the Examiner required an election of a species under 35 U.S.C. §121. In response to the restriction requirement, Appellants elected Species 1 readable on claims 1-4,6, 13-18,20 and 27-28. Appellants have amended claims 1 and 15.

The Examiner then issued a non-Final Office Action dated May 5, 2005 in which the Examiner maintained the rejections in the first Office Action. Claims 1-4, 6 and 13 were rejected under 35 U.S.C. 102(b) or, in the alternative, under 35 U.S.C.

103(a) over U.S. Patent No. to 3,800,019 to Parsey et al. ("Parsey"). Claims 1-4, 6 and 13 were rejected under 35 U.S.C. 102(e) or, in the alternative, under 35 U.S.C. 103(a) over U.S. Patent No. 6,653,943 to Lamb et al. ("Lamb"). Claims 1-4, 6, 13-18,20 and 27-28 were rejected under 35 U.S.C. 103(a) as being over U.S. Patent No. 5,685,014 to Dapsalmon ("Dapsalmon") in view of any one of Parsey or Lamb. Claims 1-4, 6, 13-18, 20 and 27-28 were rejected under the judicially created doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 6,786,243 to Moriarty et al. ("Moriarty") in view of any one of Parsey or Lamb.

In response to this Office Action, Appellant filed an Amendment and Response on August 8, 2005 amending the claims and arguing the claim rejections, as well as arguing that the Restriction was with traverse.

The Examiner then issued a Final Office Action dated September 16, 2005 maintaining the rejections and finalizing the restriction.

On December 21, 2005, Appellants' representatives held an interview with the Examiner and on the same day filed an Amendment and Response amending the claims and responding to the claim rejections. The Examiner then issued an Advisory Action dated January 11, 2006, indicating that the amendment was not entered. In response to this Advisory Action, Appellant filed a Request for Continued Examination ("RCE"), Terminal Disclaimer, and an Amendment on January 17, 2006.

A non-Final Office Action was mailed March 9, 2006 in which the Examiner entered the Amendment, Terminal Disclaimer, and RCE filed on 1/17/2006. All the previous rejections were withdrawn. Claims 1-4, 6, 14-18, 20 and 28 were rejected under 35 U.S.C. 102(b) over U.S. Patent No. 6,033,779 to Andrews

(“Andrews”). Claims 1-4, 6, 14-18, 20 and 28 were rejected under 35 U.S.C. 103(a) over Dapsalmon in view of any one of Parsey, Lamb and further in view of anyone of U.S. Patent No. 4,651,514 to Colletti (“Colletti”), U.S. Patent No. 5,113,532 to Sutton (“Sutton”), or Andrews.

In response to this Office Action, Appellant filed an Amendment and Response on May 11, 2006 arguing the claim rejections.

The Examiner then issued a Final Office Action dated July 11, 2006 maintaining the rejections.

In response to this Final Office Action, on September 26, 2006, Appellants’ representatives conducted an interview with the Examiner discussing a potential amendment and the rejections. On October 16, 2006 filed an Amendment and Response amending the claims and responding to the claim rejections. The Examiner then issued an Advisory Action dated October 26, 2006, indicating that a reference to a text was not entered. On November 28, 2006, Appellants’ representative conducted an in person interview with the Examiner.

Appellant filed a Request for Continued Examination (“RCE”) and an Amendment on December 11, 2006. A Supplemental Amendment was filed on January 8, 2007.

Claims 1-4, 6, 14-18, 20, 28 and 48 were rejected under 35 U.S.C. 102(b) or, in the alternative, under 35 U.S.C. 103(a) over U.S. Patent No. 4,093,512 to Fleischer (“Fleischer”). Claims 1-4, 6, 14 and 48 were rejected under 35 U.S.C. 102(b) or, under 35 U.S.C. 103(a) as obvious over Andrews. Claims 1-4, 6, 14 and 48 were rejected under 35 U.S.C. 103(a) over Dapsalmon in view of anyone of Parsey, Lamb,

Collett, Sutton, or Andrews. On June 25, 2007, Appellants filed an Amendment amending the claims and arguing the rejections in response to the Office Action.

On August 6, 2007 the Examiner issued a Final Office Action rejecting claims 1, 3, 14, 15, 17, 28 and 48 under 35 U.S.C. 112, second paragraph and maintaining the remaining rejections. In response, on October 30, 2007 Appellants filed and RCE and Submission that amended the claims and argued the rejections.

On January 4, 2008 Claims 1, 3, 14, 15, 17, 28 and 48 were rejected under 35 U.S.C. 103(a) over U.S. Patent No. 4,093,512 to Fleischer ("Fleischer") in view of anyone of Parsey or Lamb. Claims 1, 3, 14, 15, 17, 28 and 48 were rejected under 35 U.S.C. 103(a) as over Fleischer in view of "Applicant's Disclosure" and any one Parsey or Lamb.

On April 4, 2008 Appellants filed an Amendment amending the claims and arguing the rejections.

On May 28, 2008 the Examiner issued a Final Office Action maintaining the rejections. On July 15, 2008, Appellants filed a Response arguing the rejections. The Examiner issued and Advisory Action on July 21, 2008.

Appellants filed a Notice of Appeal and Pre-Appeal Brief Conference Request on August 28 2008. On October 9, 2008 the Panel issued a Notice of Panel Decision finding at least one issue remained for Appeal.

On January 09, 2009 Appellants filed and RCE and Submission that argued the rejections and amended the claims. On March 3, 2009, Appellants submitted a supplemental response amending the claims and the Declaration of Francis L. Davenport ("Davenport Declaration" or "Declaration"). The Examiner issued a non-

Final Office Action on March 3, 2009 rejecting claim 49 under 35 U.S.C. 112, first paragraph, and repeating the rejections of the prior Final Office Action. The Examiner refused to enter the amendment and the Davenport Declaration. On June 8, 2009 Appellants filed a Response that argued the rejections, amended the claims, and resubmitted Declaration of Francis L. Davenport ("Davenport Declaration" or "Declaration"). On July 10, 2009 the Examiner issued a Final Office Action that entered the amendment and the Davenport Declaration. At no point, however, did the Final Office Action address the evidence in the Davenport Declaration or otherwise even mention it.

Appellants filed a Notice of Appeal and Pre-Appeal Brief Conference Request on September 24, 2008. On October 9, 2008 the Panel issued a Notice of Panel Decision finding at least one issue remained for Appeal.

This Appeal Brief is filed pursuant to the Notice of Appeal and Pre-Appeal Brief Conference Decision.

Accordingly, the status of the claims may be summarized as follows:

Claims Withdrawn: 5, 7-12, 19, 21-26, and 29-45, and 48

Claims allowed: None

Claims Objected to: None.

Claims Rejected: 1, 3, 14-15, 17, 28 and 48

ClaimsAppealed: 1, 3, 14-15, 17, 28 and 48

Claims Canceled: 2, 4, 6, 13, 16, 18, 20, 27, 46-47, 49

Claims 1-49 are set forth in the Appendix attached hereto. Appellant is appealing the Final rejection of claims 1, 3, 14-15, 17, 28 and 48, which constitute all of the currently pending and non-withdrawn claims in this application.

STATUS OF THE AMENDMENTS

Appellant believes that all the submitted Amendments have been entered.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The citations to Figures and Specification locations are provided immediately following elements of independent claims 1, 15 and 48, which Appellant summarizes below. However, such citations are merely examples and are not intended to limit the interpretation of the claims or to evidence or create any estoppel.

Independent claim 1 recites a papermaking fabric multilayer monofilament [Page 1, lines 6-10, page 5, lines 14-20, page 6, lines 4-10], said multilayer monofilament having a core [Fig. 1: 12; page 6 lines 4-7] and a sheath [Fig. 1: 14, 16, 18; page 6 lines 4-7] comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of wear of a papermaking fabric comprised thereof, [Page 6, lines 7-10] wherein said multilayer monofilament is formed before being used in said papermaking fabric [page 5, lines 14-20].

Independent claim 15 recites an endless industrial fabric [Page 5, lines 14-20,; Figure 4: 20, page 7, lines 1-28] comprising one or more multilayer monofilaments [page 6, lines 4-10] each having a core [Fig. 1: 12; page 6 lines 4-7] and a sheath [Fig.

1: 14, 16, 18; page 6 lines 4-7] comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of fabric wear, [page 6, lines 7-10] wherein said one or more multilayer monofilaments are formed before being used in said endless industrial fabric [page 5, lines 14-20].

Independent claim 48 recites a papermaking fabric [page 1, lines 6-10, Page 5, lines 14-20] comprising one or more multilayer monofilaments [page 6, lines 4-10] each having a core [Fig. 1: 12; page 6 lines 4-7] and a sheath comprising [Fig. 1: 14, 16, 18; page 6 lines 4-7] a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of said papermaking fabric wear [page 6, lines 7-10], wherein said one or more multilayer monofilaments are formed before being used in said papermaking fabric [page 5, lines 14-20]..

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 3, 14, 15, 17, 28, and 48 are patentable over U.S. Patent No. 4,093,512 to Fleischer in view of U.S. Patent No. 3,800,019 to Parsey or U.S. Patent No. 6,653,943 to Lamb under 35 U.S.C. §103(a).

Whether claims 1, 3, 14-15, 17, 28 and 48 are patentable over U.S. Patent No. 4,093,512 to Fleischer in view of "Applicant's Disclosure," U.S. Patent No. 3,800,019 to Parsey or U.S. Patent No. 6,653,943 to Lamb.

ARGUMENTS

I. **Claims 1, 3, 14, 15, 17, 28 and 48 are patentable over U.S. Patent No. 4,093,512 to Fleischer in view of U.S. Patent No. 3,800,019 to Parsey (“Parsey”) or U.S. Patent No. 6,653,943 to Lamb under 35 U.S.C. §103(a)**

Claims 1, 3, 5, 7-12, 14-15, 17, 19, 21-26, and 28-48 are pending in the application; claims 5, 7-12, 19, 21-26, and 29-45 are withdrawn. Claims 1, 3, 14, 15, 17, 28, and 48 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,093,512 to Fleischer (“Fleischer”) in view of U.S. Patent No. 3,800,019 to Parsey (“Parsey”) or U.S. Patent No. 6,653,943 to Lamb (“Lamb”). For the reasons set forth below, Appellants traverse and respectfully request reconsideration and withdrawal of the rejections.

Independent claims 1 recites:

A papermaking fabric multilayer monofilament, **said multilayer monofilament having a core and a sheath comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity** for indicating a level of wear of a papermaking fabric comprised thereof, **wherein said multilayer monofilament is formed before being used in said papermaking fabric.** (Emphasis added).

Independent claims 15 and 48 recite:

...one or more **multilayer [mono]filaments each having a core [and a sheath] [comprising/comprised of a monofilament yarn surrounded by] a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or**

reflectivity for indicating a level of wear, wherein said multilayer monofilament is formed before being used in said endless industrial fabric.

The claims recite a multilayer monofilament for use in a papermaking fabric. The multilayer monofilament is formed of a core and a plurality of layers that are distinguishable from each other and the core. Declaration of Francis L. Davenport ("Davenport Declaration") ¶ 9. The multilayer monofilament, as recited in the claims, takes its final form before being used in a papermaker's fabric. Davenport Declaration ¶ 9.

For example, FIG. 4 of the Instant Application is a plan view of an unused fabric 20 (wear side) comprising at least some of the multilayered filaments 10, according to the teachings of the present invention. Davenport Declaration ¶ 10. Fabric 20 can be a structure woven from yarns 10 lying in the cross-machine direction (CD) and yarns 22 lying in the machine direction (MD), although it need not be woven to fall within the scope of the present invention, and could be a nonwoven structure. Davenport Declaration ¶ 10. In FIG. 4, CD yarns 10 which are multilayered filaments of the variety shown in FIGS. 1, 2 and 3 are depicted as weaving with MD yarns 22 in a plain weave. Davenport Declaration ¶ 10. In the example shown, the knuckles 24 on the surface of the fabric 20 are most susceptible to wear because they are formed where a yarn in one direction of the fabric 20 passes or crosses over one in the other direction, and are therefore elevated points on the surface of the fabric 20. Davenport Declaration ¶ 10.

After the fabric 20 has been used for some period of time, the same plan view of the fabric 20 will appear as shown in FIG. 5. Davenport Declaration ¶ 11. At least one

or more of the outer layers 16, 18 of the CD multilayered filaments 10 are shown to be worn away to the point where an inner layer 14 or the core 12 is exposed to view.

Davenport Declaration ¶ 11. By virtue of its different color or reflectivity, for example, compared to that of the outer layers 16, 18, the inner layer 14 or core 12 gives an indication of the level of wear of the fabric 20. *Instant Application*, paragraphs [0027] and [0028]. Davenport Declaration ¶ 11.

Because these fabrics have a limited lifespan and require regular replacement, there needs to be a means to indicate the wear level in the fabric, so that the fabric can be replaced in time, avoiding any catastrophic failure and loss, damage or shutting down of the machines. Davenport Declaration ¶ 12. Moreover, because these industrial fabrics have a width of from 5 to over 33 feet, a length of from 40 to over 400 feet and weigh from approximately 100 to over 3,000 pounds, replacement of these fabrics often involves taking the machine out of service, removing the worn fabric, setting up to install a fabric and installing the new fabric. Davenport Declaration ¶ 12. And because these fabrics are typically made to order, it is important to know the condition of the fabric being currently used on the paper machine. Davenport Declaration ¶ 12. In the instant invention the individual monofilament yarn comprises the core and is surrounded by a **plurality of respective layers**. See *Instant Application*, page 6, lines 3-17. Davenport Declaration ¶ 12. These plurality of layers, which can be dyes as recited in the specification, act as level indicators for wear of the industrial fabric e.g. a green color used as an outermost coating of the filament will indicate a healthy fabric, and a red color used as an innermost coating of the core filament would call for a replacement. Davenport Declaration ¶ 12.

As to Fleischer, although it discloses that its load bearing elements can be monofilaments (col. 3, lines 27-56), there is no further discussion regarding the structure of this monofilament in the rest of Fleischer's disclosure. Davenport Declaration ¶ 13. The only yarn structure that Fleischer later discloses in col. 4 is coated using a two step resin treatment by first applying a thermosetting acrylic resin and then a phenolic resin (*Fleisher*, col. 4, lines 37-50). Davenport Declaration ¶ 13. However, an ordinarily skilled artisan would understand that the coating method suggested for applying the resin in Fleischer is that as described in Christie et al, U.S. Patent Nos. 3,252,821 and 3,149,003, both of which teach **coating the fabric itself and not the monofilament**. *Fleisher* at col.4 line 53- col. 5, line 6. Davenport Declaration ¶ 13. While coating the fabric might cover one side of the monofilaments, the knuckles of the fabric where the warp and weft intersect, are certainly not going to have the same multilayer coated structure: nor, more importantly, is there assurance of uniformity. Davenport Declaration ¶ 13. Accordingly, the cited reference fails to disclose or predict the use of monofilaments that are first coated and then used to make the fabric. Davenport Declaration ¶ 13.

Nonetheless, the Examiner alleges that coating the monofilaments before forming the fabric renders the article identical, or only slightly different from Fleischer's fabric. Appellants disagree, and respectfully urge that the rejection is in error. Davenport Declaration ¶ 14.

Fleischer's two step resin treatment coating the fabric itself, unlike the claimed monofilament coated before forming the fabric, would result in a fundamentally different product with respect to indicating a level of wear. Davenport Declaration ¶ 15. As

explained in the prior response, Fleischer's post-fabric coatings would fail to, *inter alia*, (a) cover the whole monofilament (hence failing to layer or sheath it) and (b) non-uniformly coat the filaments at the knuckles where warp and weft intersect. Davenport Declaration ¶ 15. In actual use either or both of the lack of coverage and irregularity of the applied coatings make them ill-suited to be adapted to detect wear via any visual distinction between the respective layers and the core, and in fact doing so would likely confuse, rather than aid, detection of a level of wear. Davenport Declaration ¶ 15.

Moreover, Fleischer's objective is to produce a papermakers' belt with ultra high modulus load bearing yarns such that the belt has improved stretch resistance.

Davenport Declaration ¶ 16. As pointed out in Appellants' Response dated June 22, 2007, Fleischer attempts to achieve an improvement in tensile strength and stretch resistance of forming fabrics woven from multifilaments by employing high tenacity materials. Fleischer, col. 4, line 53 – col. 5, line 6 Davenport Declaration ¶ 16. Those of ordinary skill in the art, however, know that materials like Kevlar have very poor abrasion resistance when used in papermaking fabrics, and therefore in order to survive, these materials **must be** wrapped and/or coated. Davenport Declaration ¶ 16.

One objective of the above-claimed invention, to the contrary, is to give the papermaker an idea of how and to what levels the wear or at what rate the wear is occurring before catastrophic failure occurs. Davenport Declaration ¶ 17. If the coating on the Kevlar yarn of Fleischer is gone, the fabric is in imminent failure mode, therefore providing for all or nothing. Davenport Declaration ¶ 17. On the other hand, with the present invention the papermaker is alerted to, in advance, the state of the papermaking fabric with the plurality of layers indicating a level of fabric wear, such that the

papermaker could replace it with a new fabric in case of a worn out state, thus avoiding a catastrophic failure and subsequent repair/losses. Davenport Declaration ¶ 17. As a result, an ordinarily skilled artisan would have no reason to adapt Fleischer's coated filaments with contrasting color or reflectivity as this would provide no effective warning at all. Davenport Declaration ¶ 17.

Further, despite the fact that Fleischer states that its yarn can be of multifilament or monofilament form, an ordinarily skilled artisan would appreciate **that at present no such material exists in monofilament form with the modulus specified that can be used in paper machine clothing that also has the other required characteristics (flexibility, abrasion resistance etc)**. Davenport Declaration ¶ 18. The only materials that exist are multifilaments such as the aramids Fleisher expressly teaches, **which is to be expected as they cannot be made into monofilament form**. Davenport Declaration ¶ 18. Quite simply, no such "Ultramono" exists for the claimed invention. And again, if Fleisher's coating or wrapping wears away, the aramids have such poor abrasion resistance that **they will catastrophically fail**. Davenport Declaration ¶ 18.

Following the decision by the Supreme Court of the United States in *KSR*, 550 U.S. 398, 82 U.S.P.Q.2d 1365 (2007), the analogous art requirement remains an important part of the primary analysis under *Graham v John Deere Co. of Kansas City*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). As recently re-stated by the Board of Patent Appeals and Interferences, the analogous-art test requires the Board to show that a reference is either in the field of the applicant's endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as

a basis for rejection. *Ex Parte Bartly et al.*, 2008 WL 275524 (Bd.Pat.App. & Interf. 2008) (Appeal No. 2007-2583). The Board has further explained that:

In view of KSR's holding that "any problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the matter claimed" [citation omitted] it is clear that the **second part** of the analogous-art test as stated [above] must be expanded to require a determination of **whether the reference**, even though it may be in a different field from that of the inventor's endeavor, is one which, because of the matter with which it deals, **logically** would have commended itself to an artisan's (not necessarily the inventor's) attention in considering **any need or problem** known in the field of endeavor.

Id., at 2008 WL 275525 (emphasis added).

Turning to Parsey and Lamb, an ordinarily skilled artisan would not turn to the Parsey or Lamb to cure the deficiencies of Fleischer as the rope structures of Parsey and Lamb are not similar or analogous to the claimed invention. Davenport Declaration ¶ 19.

Parsey teaches a rope structure constructed from a core of at least one bundle of filaments, wherein the core may be bound by a steel tape or wire or sheathed with two organic coatings of different colors. Davenport Declaration ¶ 20. In these

configurations, damage or wear to the rope can be detected by measuring the resistance between the steel binding means or by a change in the color on the outside of the rope. See *Parsey*, col. 1, line 39 - col. 2, line 29. Davenport Declaration ¶ 20. As used in *Parsey*, a bundle is used "to denote a group of filaments arranged in parallel fashion. Such a group may be assembled by combining together without twisting a number of filamentary yarns to produce the larger bundle required for a rope core." *Parsey*, col. 3, lines 50-55. Davenport Declaration ¶ 20. Therefore, *Parsey* teaches a bundle or plurality of filaments that are sheathed, not a core comprised of a single yarn that is surrounded by a plurality of respective layers. Davenport Declaration ¶ 20.

Lamb is directed to suspension ropes having polyurethane sheaths as used, for example, in an elevator assembly. *Lamb*, col. 2, lines 26-28. Davenport Declaration ¶ 21. As depicted in Figure 1a, the suspension or wire rope 4 is constructed from a wire rope that includes a **plurality of load supporting wire members or strands**. *Lamb*, at col. 3, lines 16-20. Davenport Declaration ¶ 21. In various embodiments, the wire rope in its entirety (which includes the plurality of wires or strands) is encased in sheaths of materials having differing properties where the properties of the sheath material are used to detect an amount or wear on the suspension rope. Davenport Declaration ¶ 21. Therefore, Lamb teaches a plurality of wire members or strands that are sheathed, whereas the instant invention teaches a core comprised of a single yarn that is surrounded by a plurality of respective layers. Davenport Declaration ¶ 21.

The structures and uses of Lamb and *Parsey*'s rope structures are not similar or analogous to those of the claims, and an ordinarily skilled artisan would not turn to them for solutions. Davenport Declaration ¶ 22.

The claims recite a multilayer filament having a core comprised of a single yarn surrounded by a plurality of respective layers that are used to indicate the level of wear of an industrial fabric constructed therefrom. Davenport Declaration ¶ 23. Parsey, in contrast, is directed to a rope structure constructed from a core of at least one bundle of filaments, wherein the core may be bound by a steel tape or wire or sheathed with two organic coatings of different colors. Davenport Declaration ¶ 23. Lamb, in contrast, is directed to suspension ropes having polyurethane sheaths as used, for example, in an elevator assembly. Davenport Declaration ¶ 23. Neither Parsey nor Lamb are within the field of an ordinarily skilled artisan's endeavor. Parsey relates to rope structures and Lamb relates to suspension ropes. Davenport Declaration ¶ 23.

Secondly, Parsey and Lamb are not reasonably pertinent to the particular problem with which the instant inventors were involved. Davenport Declaration ¶ 24. As previously stated, Parsey relates to rope structures and Lamb relates suspension ropes. Davenport Declaration ¶ 24. In contrast, the instant invention is directed to problems associated with wear of an industrial fabric, which is subject to wholly different kinds of stresses and wear, explained above, than those for ropes. Davenport Declaration ¶ 24. Moreover, it is not a further product made from these ropes that needs wear detection, and indeed, these ropes are not woven or formed into another product at all. Davenport Declaration ¶ 24. They are not yarns. Davenport Declaration ¶ 24. It is clear that the matters with which Parsey and Lamb are concerned would **not** logically have commended themselves to an ordinarily skilled artisan's attention in considering any problem, including the problem to be solved by the instant invention. Davenport Declaration ¶ 24.

The claimed structures are quite different than those of Lamb and Parsey. The claims are directed to filaments that are used to detect wear in an industrial fabric. Davenport Declaration ¶ 25. In contrast, neither Parsey nor Lamb perform a function similar to detecting wear of an industrial fabric. Davenport Declaration ¶ 25. Instead Parsey relates to detecting wear of rope structures comprised of bundles of filaments and Lamb relates to detecting wear of suspension ropes for use in, for example, elevator assemblies. Davenport Declaration ¶ 25.

The Examiner denies that Parsey and Lamb are non-analogous art, despite the fact that each relates to rope structures and neither of them teach or suggest use of a monofilament. Davenport Declaration ¶ 26. First, page 9 of the Final Office Action improperly states that Applicants said Parsey strictly relates to elevator ropes. As shown at page 12 of the Amendment and Response dated April 4, 2008, Appellants stated Parsey and Lamb relate to rope structures. However, insofar as the Examiner is citing to the *KSR v. Teleflex* ("KSR") case for the proposition that a technique has been used to improve one device – then it is proper to look at the **devices** actually disclosed in Parsey and Lamb to determine if either is indeed similar. One of ordinary skill in the papermaking art would not look to rope-making generally, or into elevator suspension ropes or marine water cordages specifically, to come up with a solution for wear in papermaking fabrics. Davenport Declaration ¶ 26. A papermaking fabric is not similar to a rope. Davenport Declaration ¶ 26.

Along the same lines, at page 3, the May Office Action states Parsey (at Col. 2, lines 8-29) and Lamb (at Col. 4, lines 20-35), "each disclose that it is known in the wear detecting art that a core may be surrounded by a plurality of outer layers of different

colors to indicate degree of wear.” Davenport Declaration ¶ 27. This allegation is maintained in the following Office Actions. Of course, neither of these references refer to nor even imply a “wear detecting art,” because there is no such thing. Davenport Declaration ¶ 27. To the contrary, and as amply explained in prior responses, Parsey and Lamb are concerned with rope-making, and not industrial fabrics, much less papermaking fabrics. In particular, the references disclose sheathing (and re-sheathing) a rope to detect wear of a rope, not a yarn, and certainly not a monofilament. Davenport Declaration ¶ 27. An ordinarily skilled artisan simply would not look to ropes – be they for elevators or marine cordage – as a material to make papermaking fabrics out of, or to seek solutions for problems associated with papermaking fabrics.

Davenport Declaration ¶ 27.

Thus, as amply explained in the prior responses and evidenced by, among other things, the Declaration, neither Fleischer, Parsey, Lamb, nor the Appellants’ own disclosure (discussed below), alone or in combination, disclose or render obvious the above-recited limitations of independent claims 1, 15 and 48. The Final Office Action of July 10, 2009 makes no new arguments, despite the Declaration submitted in this case prior to the Final Office Action. Moreover, throughout the “Response to Arguments” the Final Office Action repeatedly alleges that the following statements of fact attested to thereby are “unsupported argument”:

- That at present **no material exists in monofilament form** with the modulus specified that can be used in paper machine clothing that also has the other required characteristics.

- The only materials that exist are **multifilaments** such as the aramids Fleisher expressly teaches, **which is to be expected as they cannot be made into monofilament form.**
- That there is no such thing as a “wear detecting art.”

Emphasis added. First, the 1974 case that the Final Office Action cites for its allegation of “unsupported argument” is *In re Pearson*, 494 F.2d 1399, 1405, which stands for the proposition that **attorney argument**, is not a substitute for evidence in the record: “Attorney's argument in a brief cannot take the place of evidence.” *Id.* An Affidavit or Declaration under 37 CFR 1.132 presents evidence, and must be considered and addressed. See MPEP 2145. The Examiner's dismissal of the statements of fact throughout the Declaration and the evidence of record as “unsupported argument,” is in error, and has deprived the Appellant of a full and fair hearing.

The Declaration comprises the statements of fact of an expert in the field to which this application pertains. Without repeating the entirety of the Declaration, which speaks for itself, unaddressed **facts** adduced include, but are not limited to:

- Because papermaking fabrics have a limited lifespan and require regular replacement, there needs to be a means to indicate the wear level in the fabric, so that the fabric can be replaced in time, avoiding any catastrophic failure and loss, damage or shutting down of the machines. Moreover, because these industrial fabrics have a width of from 5 to over 33 feet, a length of from 40 to over 400 feet and weigh from approximately 100 to over 3,000 pounds, replacement of these fabrics often involves taking the machine out of service, removing the worn fabric, setting up to install a fabric and installing the new fabric. And because these fabrics

are typically made to order, it is important to know the condition of the fabric being currently used on the paper machine. Davenport Declaration, ¶12.

- Moreover, Fleischer's objective is to produce a papermakers' belt with ultra high modulus load bearing yarns such that the belt has improved stretch resistance. Fleischer attempts to achieve an improvement in tensile strength and stretch resistance of **forming fabrics woven from multifilaments** by employing high tenacity materials. *Fleischer*, col. 4 line 53- col. 5, line 6. Those of ordinary skill in the art, however, know that materials like Kevlar have very poor abrasion resistance when used in papermaking fabrics, and therefore in order to survive, these materials **must be wrapped and/or coated**. Davenport Declaration, ¶16.
- One objective of the above-claimed invention, to the contrary, is to give the papermaker an idea of how and to what levels the wear or at what rate the wear is occurring **before catastrophic failure occurs. If the coating on the Kevlar yarn of Fleischer is gone, the fabric is in imminent failure mode, therefore providing for all or nothing**. Davenport Declaration, ¶17.
- Further, despite the fact that Fleischer states that its yarn can be of multifilament or monofilament form, an ordinarily skilled artisan would appreciate **that at present no such material exists in monofilament form with the modulus specified that can be used in paper machine clothing that also has the other required characteristics (flexibility, abrasion resistance etc)**. The only materials that exist are multifilaments such as the aramids Fleisher expressly teaches, **which is to be expected as they cannot be made into monofilament form**. Quite simply, no such "Ultramono" exists for the claimed invention. And again, if Fleisher's coating or

wrapping wears away, the aramids have such poor abrasion resistance that **they will catastrophically fail**. Davenport Declaration, ¶¶18.

- Neither Parsey nor Lamb refer to nor even imply “a wear detecting art,” because there is no such thing. Davenport Declaration, ¶¶27.

Thus the Office Action’s dismissal of the statements of fact throughout the Declaration as “conclusions not based upon fact,” is in error. As MPEP 2145 states:

Office personnel should consider all rebuttal arguments and evidence presented by applicants. See, e.g., *Soni*, 54 F.3d at 750, 34 USPQ2d at 1687 (error not to consider evidence presented in the specification). C.f., *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996) (error not to consider factual evidence submitted to counter a 35 U.S.C. 112 rejection); *In re Beattie*, 974 F.2d 1309, 1313, 24 USPQ2d 1040, 1042-43 (Fed. Cir. 1992) (Office personnel should consider declarations from those skilled in the art praising the claimed invention and opining that the art teaches away from the invention.)

Finally, at page 7 of the Final Office Action pinpoint cites Fleischer at col. 4, Ins. 22-36 and Figure 7 for an individually resin-coated monofilament. However, the cited portion unequivocally says that Figure 7 shows, “***multifilament*** core yarns 16 which have been coated with **a** resin 18,” not a monofilament. And indeed, that is what Figure 7 shows. Thus it is not a “***multilayer monofilament*** [] formed before being used in said papermaking fabric.”

For the reasons given above, neither Fleischer, Parsey, Lamb, alone or in combination, disclose or render obvious the above-recited limitations of independent claims 1, 15 and 48. As all the remaining ultimately depend from these independent claims, and as none of the cited art of record cures the deficiency of Fleischer, Parsey, and Lamb as applied to the independent claims, Appellant urges all the claims are presently in condition for allowance. See Davenport Declaration ¶ 29. Appellant thereby respectfully requests reversal of the rejections and allowance of the claims by this Honorable Board.

II. Claims 1, 3, 14-15, 17, 28 and 48 are patentable over Fleischer in view of “Applicant’s Disclosure” and Parsey or Lamb under 35 U.S.C. §103(a)

Claims 1, 3, 14-15, 17, 28 and 48 have been rejected under 35 U.S.C. §103(a) over Fleischer in view of “Applicant’s Disclosure” and Parsey or Lamb. For the reasons given above, here incorporated by reference, Fleisher, Parsey and Lamb are deficient as against independent claims 1, 15 and 48. At page 5 of the Final Office Action, the Examiner employs hindsight reasoning to supply a reason for his application of Fleischer, noting that “Applicant discloses that a means for monitoring wear on a papermaker’s fabric, and particularly at any point on its inner and outer surfaces, even when the paper machine is operating, would be very helpful to those in the papermaking industry.” Davenport Declaration ¶ 28. This reliance on the Applicant’s disclosure is repeated at page 7 of the present Office Action. Applicants respectfully note that *KSR* cautions that hindsight reasoning based on the Applicants’ own disclosure distorts analysis: “[a] factfinder should be aware, of course, of the distortion cased by hindsight bias and must be cautious of arguments reliant on ex post reasoning.” Emphasis added. As MPEP 2174 “Legal Concept of Prima Facie Obviousness” states:

[T]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Emphasis added. Indeed Applicants do not deny that its claimed invention is very helpful to those in the papermaking industry. Davenport Declaration ¶ 28. Moreover, the Specification also explained that "[n]ormally, wear is monitored using a thickness gauge. However, it is difficult to measure the thickness of a papermaker's fabric more than a foot or two in from its edges with such a gauge...." Davenport Declaration ¶ 28. The Specification simply shows that the Applicant identified and provided a solution to

the long-felt need of monitoring-wear that was inadequately met by prior art gauges. If anything, the prior art shows that the approaches taken before that disclosed were of a different character (gauges). Davenport Declaration ¶ 28.

Also, as more fully explained above, the Examiner erred in not considering the evidence submitted. An Affidavit or Declaration under 37 CFR 1.132 presents evidence, and must be considered and addressed. See MPEP 2145.

For the reasons given above, neither Fleischer, Parsey, Lamb, nor the Applicants' own disclosure, alone or in combination, disclose or render obvious the above-recited limitations of independent claims 1, 15 and 48. As all the claims ultimately depend from these independent claims, and as none of the cited art of record cures the deficiency of Fleischer, Parsey, and Lamb as applied to the independent claims, Appellants urge all the claims are presently in condition for allowance. See. Davenport Declaration ¶ 29. Appellant thereby respectfully requests reversal of the rejections and allowance of the claims by this Honorable Board.

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CONCLUSION

For the reasons discussed above, claims 1, 3, 5, 7-12, 14-15, 17, 19, 21-26, and 28-48 are patentable. It is, therefore, respectfully submitted that the Examiner erred in rejecting claims 1, 3, 14-15, 17, 28 and 48 and Appellant requests a reversal of these rejections by this Honorable Board. As a result, the allowance of this application should be mandated.

Respectfully submitted,

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APPENDIX I

CLAIMS ON APPEAL

What is claimed is:

1. (Previously Presented) A papermaking fabric multilayer monofilament, said multilayer monofilament having a core and a sheath comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of wear of a papermaking fabric comprised thereof, wherein said multilayer monofilament is formed before being used in said papermaking fabric.
2. (Cancelled)
3. (Previously Presented) The papermaking fabric multilayer filament of claim 1, wherein the indicated level of fabric wear is associated with a wear level through the respective layers.
4. (Cancelled)
5. (Withdrawn) The filament of claim 2, wherein one of the differing properties is reflectivity.
6. (Cancelled)

7. (Withdrawn) The filament of claim 1, comprising a light absorbing core and transparent layers having varying refractions.

8. (Withdrawn) The filament of claim 7, wherein light reflected by the core changes color depending on the wear level through the transparent layers.

9. (Withdrawn) The filament of claim 1, comprising a light transmitting core and transparent layers having varying refractions.

10. (Withdrawn) The filament of claim 9, wherein light transmitted from the core changes color depending on the wear level through the transparent layers.

11. (Withdrawn) The filament of claim 1, wherein one or more of the core and the respective layers are doped with dyes.

12. (Withdrawn) The filament of claim 11, wherein the dye is detectable by a sensor when excited by an external energy source.

13. (Canceled).

14. (Previously Presented) The papermaking fabric multilayer filament of claim 1 wherein the multilayer filament comprises some or all of a multifilament yarn.

15. (Previously Presented) An endless industrial fabric comprising one or more multilayer monofilaments each having a core and a sheath comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of fabric wear, wherein said one or more multilayer monofilaments are formed before being used in said endless industrial fabric.

16. (Cancelled)

17. (Previously Presented) The endless industrial fabric of claim 15, wherein the indicated level of fabric wear is associated with a wear level through the respective layers.

18. (Cancelled)

19. (Withdrawn) The fabric of claim 16, wherein one of the differing properties is reflectivity.

20. (Cancelled)

21. (Withdrawn) The fabric of claim 15, wherein each filament comprises a light absorbing core and transparent layers having varying refractions.

22. (Withdrawn) The fabric of claim 21, wherein light reflected by the core changes color depending on the wear level through the transparent layers.

23. (Withdrawn) The fabric of claim 15, wherein each filament comprises a light transmitting core and transparent layers having varying refractions.

24. (Withdrawn) The fabric of claim 23, wherein light transmitted from the core changes color depending on the wear level through the transparent layers.

25. (Withdrawn) The fabric of claim 15, wherein one or more of the core and the respective layers are doped with dyes.

26. (Withdrawn) The fabric of claim 25, wherein the dye is detectable by a sensor when excited by an external energy source.

27. (Canceled).

28. (Previously Presented) The endless industrial fabric of claim 15 wherein the multilayer filament comprises some or all of a multifilament yarn.

29. (Withdrawn) A filament indicative of a level of wear of a fabric comprising one or more conductive monofilaments.

30. (Withdrawn) The filament of claim 29, wherein the indicated level of fabric wear is associated with a wear level through the conductive monofilament.

31. (Withdrawn) The filament of claim 29 wherein the filament has a round or non-round shape

32. (Withdrawn) A fabric comprising one or more conductive monofilaments indicative of a level of fabric wear.

33. (Withdrawn) The fabric of claim 32, wherein the indicated level of fabric wear is associated with a wear level through the conductive monofilaments.

34. (Withdrawn) The fabric of claim 32 wherein some or all of the conductive monofilaments have a round or non-round shape.

35. (Withdrawn) The fabric of claim 32 wherein the conductive monofilament comprises some or all of a multifilament yarn.

36. (Withdrawn) A filament having a core surrounded by a plurality of layers, and forming a visible guideline on a fabric comprising said filament.

37. (Withdrawn) The filament of claim 36, wherein the fabric is used on a papermaking machine, and the guideline is used for one of determining fabric alignment, on-line speed measurements, or a trigger for a guiding system.

38. (Withdrawn) The filament of claim 37, wherein the guideline runs in a cross machine direction.

39. (Withdrawn) The filament of claim 37, wherein the guideline runs in a machine direction.

40. (Withdrawn) The filament of claim 36, wherein the guideline resists removable by high-pressure showers or chemical cleaning.

41. (Withdrawn) The filament of claim 36 wherein the filament has a round or non-round shape.

42. (Withdrawn) The filament of claim 36 wherein the filament comprises some or all of a multifilament yarn.

43. (Withdrawn) A conductive monofilament having a contrasting color and used as a guideline on a fabric comprising said monofilament.

44. (Withdrawn) The filament of claim 43 wherein the filament has a round or non-round shape.

45. (Withdrawn) The filament of claim 43 wherein the filament comprises some or all of a multifilament yarn.

46- 47 (Cancelled)

48. (Previously Presented) A papermaking fabric comprising one or more multilayer monofilaments each having a core and a sheath comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of said papermaking fabric wear, wherein said one or more multilayer monofilaments are formed before being used in said papermaking fabric.

49. (Cancelled).

APPENDIX II

EVIDENCE

I. Exhibit I: Declaration of Francis L. Davenport under 37 C.F.R. §1.132,
entered by the Examiner in the Office Action mailed July 10, 2009.

EXHIBIT I

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Per Martinsson, et al.
Serial No. : 10/608,630
For : WEAR LEVEL INDICATING FILAMENTS AND
FABRICS (AND GUIDELINE APPLICATIONS)
Filing Date : June 27, 2003
Examiner : Andrew T. Piziali
Group Art Unit : 1794
Confirmation No. : 8456

January 21, 2009

DECLARATION OF FRANCIS L. DAVENPORT UNDER 37 C.F.R. §1.132

MAIL STOP RCE
Commissioner for Patents, P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Francis L. Davenport, declare and state that:

1. I make this statement in connection with U.S. Application Serial No. 10/608,630 ("the '630 application").
2. I am an **Engineer** and an employee of Albany International Corp., the assignee of the '630 application.
3. As indicated on my attached *Curriculum vita*, I received **BS Ch E** degree from **Clarkson University** in Potsdam, NY. I have been employed by the assignee of this application, since 1974. In view of my education and experience, I consider myself to be an expert in the field to which this application pertains.

4. I am familiar with the prosecution history of the '630 application, up to and including the Notice of Panel Decision mailed on October 9, 2008.
5. Claims 1, 3, 5, 7-12, 14-15, 17, 19, 21-26, and 28-48 are pending in the application; claims 5, 7-12, 19, 21-26, and 29-47 are withdrawn. Claims 1, 3, 14, 15, 17, 28, and 48 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,093,512 to Fleischer ("Fleischer") in view of U.S. Patent No. 3,800,019 to Parsey ("Parsey") or U.S. Patent No. 6,653,943 to Lamb ("Lamb"). Claims 1, 3, 14-15, 17, 28 and 48 have been rejected under 35 U.S.C. §103(a) over Fleischer in view of "Applicant's Disclosure" and Parsey or Lamb.
6. Claims 1, 3, 14, 15, 17, 28 and 48 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,093,512 to Fleischer (hereinafter merely "Fleischer") in view of any one of U.S. Patent No. 3,800,019 to Parsey ("Parsey") or U.S. Patent No. 6,653,943 to Lamb ("Lamb").
7. Independent claims 1 recites: "A papermaking fabric multilayer monofilament, said multilayer monofilament having a core and a sheath comprising a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of wear of a papermaking fabric comprised thereof, wherein said multilayer monofilament is formed before being used in said papermaking fabric." (Emphasis added).
8. Independent claims 15 and 48 each recite: "one or more multilayer [mono]filaments each having a core [and a sheath] [comprising/comprised of a monofilament yarn surrounded by] a plurality of respective layers visibly distinguishable from one another and the core by their contrasting color, or reflectivity for indicating a level of wear, wherein said multilayer monofilament is formed before being used in said endless industrial fabric."
9. The claims recite a multilayer monofilament for use in a papermaking fabric. The multilayer monofilament is formed of a core and a plurality of layers that are distinguishable from each other and the core. The multilayer monofilament, as recited in the instant claims, takes its final form before being used in a papermaker's fabric.

10. For example, FIG. 4 of the Instant Application is a plan view of an unused fabric 20 (wear side) comprising at least some of the multilayered filaments 10, according to the teachings of the present invention. Fabric 20 can be a structure woven from yarns 10 lying in the cross-machine direction (CD) and yarns 22 lying in the machine direction (MD), although it need not be woven to fall within the scope of the present invention, and could be a nonwoven structure. In FIG. 4, CD yarns 10 which are multilayered filaments of the variety shown in FIGS. 1, 2 and 3 are depicted as weaving with MD yarns 22 in a plain weave. In the example shown, the knuckles 24 on the surface of the fabric 20 are most susceptible to wear because they are formed where a yarn in one direction of the fabric 20 passes or crosses over one in the other direction, and are therefore elevated points on the surface of the fabric 20.
11. After the fabric 20 has been used for some period of time, the same plan view of the fabric 20 will appear as shown in FIG. 5. At least one or more of the outer layers 16, 18 of the CD multilayered filaments 10 are shown to be worn away to the point where an inner layer 14 or the core 12 is exposed to view. By virtue of its different color or reflectivity, for example, compared to that of the outer layers 16, 18, the inner layer 14 or core 12 gives an indication of the **level of wear** of the fabric 20. *Instant Application*, paragraphs [0027] and [0028].
12. Because these fabrics have a limited lifespan and require regular replacement, there needs to be a means to indicate the wear level in the fabric, so that the fabric can be replaced in time, avoiding any catastrophic failure and loss, damage or shutting down of the machines. Moreover, because these industrial fabrics have a width of from 5 to over 33 feet, a length of from 40 to over 400 feet and weigh from approximately 100 to over 3,000 pounds, replacement of these fabrics often involves taking the machine out of service, removing the worn fabric, setting up to install a fabric and installing the new fabric. And because these fabrics are typically made to order, it is important to know the condition of the fabric being currently used on the paper machine. In the instant invention the individual monofilament yarn comprises the core and is surrounded by a **plurality of** respective layers. *See Instant Application*, page 6, lines 3-17. These plurality of

layers, which can be dyes as recited in the specification, act as level indicators for wear of the industrial fabric e.g. a green color used as an outermost coating of the filament will indicate a healthy fabric, and a red color used as an innermost coating of the core filament would call for a replacement.

13. As to Fleischer, although it discloses that its load bearing elements can be monofilaments (col. 3, lines 27-56), there is no further discussion regarding the structure of this monofilament in the rest of Fleischer's disclosure. The only yarn structure that Fleischer later discloses in col. 4 is coated using a two step resin treatment by first applying a thermosetting acrylic resin and then a phenolic resin (col. 4, lines 37-50). However, an ordinarily skilled artisan would understand that the coating method suggested for applying the resin in Fleischer is that as described in Christie et al, U.S. Patent Nos. 3,252,821 and 3,149,003, both of which teach **coating the fabric itself and not the monofilament.** *Fleisher* at col.4 line 53- col. 5, line 6. While coating the fabric might cover one side of the monofilaments, the knuckles of the fabric where the warp and weft intersect, are certainly not going to have the same multilayer coated structure; nor, most importantly, is there assurance of uniformity. Accordingly, the cited reference fails to disclose or predict the use of monofilaments that are first coated and then used to make the fabric.
14. Nonetheless, the Final Office Action dated May 28, 2008 ("Final Office Action") alleges that coating the monofilaments before forming the fabric renders the article identical, or only slightly different from Fleischer's fabric. This is in error.
15. Fleischer's two step resin treatment coating the fabric itself, unlike the claimed monofilament coated before forming the fabric, would result in a fundamentally different product with respect to indicating a level of wear. Fleischer's post-fabric coatings could fail to, *inter alia*, (a) cover the whole monofilament (hence failing to layer or sheath it) and (b) non-uniformly coat the filaments at the knuckles where warp and weft intersect. In actual use either or both of the lack of coverage and irregularity of the applied coatings make them ill-suited to be adapted to detect wear via any visual distinction between the respective layers and the core, and in fact doing so would likely confuse, rather than aid, detection of a level of wear.

16. Moreover, Fleischer's objective is to produce a papermakers' belt with ultra high modulus load bearing yarns such that the belt has improved stretch resistance. Fleischer attempts to achieve an improvement in tensile strength and stretch resistance of forming fabrics woven from multifilaments by employing high tenacity materials. *Fleischer*, col. 4 line 53- col. 5, line 6. Those of ordinary skill in the art, however, know that materials like Kevlar have very poor abrasion resistance when used in papermaking fabrics, and therefore in order to survive, these materials **must be wrapped and/or coated**.
17. One objective of the above-claimed invention, contrariwise, is to give the papermaker an idea of how and to what levels the wear or at what rate the wear is occurring **before catastrophic failure occurs**. **If the coating on the Kevlar yarn of Fleischer is gone, the fabric is in imminent failure mode, therefore providing for all or nothing**. On the other hand, with the claimed invention the papermaker is alerted to, in advance, the state of the papermaking fabric with the plurality of layers indicating a level of fabric wear, such that the papermaker could replace it with a new fabric in case of a worn out state, thus avoiding a catastrophic failure and subsequent repair/losses. As a result, an ordinarily skilled artisan would have no reason to adapt Fleischer's coated filaments with contrasting color or reflectivity as this would provide no effective warning at all.
18. Further, despite the fact that Fleischer states that its yarn can be of multifilament or monofilament form, an ordinarily skilled artisan would appreciate **that at present no such material exists in monofilament form with the modulus specified that can be used in paper machine clothing that also has the other required characteristics (flexibility, abrasion resistance etc.)**. The only materials that exist are multifilaments such as the aramids Fleisher expressly teaches, **which is to be expected as they cannot be made into monofilament form**. Quite simply, no such "Ultramono" exists for the claimed invention. And again, if Fleisher's coating or wrapping wears away, the aramids have such poor abrasion resistance that they **will catastrophically fail**.

19. An ordinarily skilled artisan would not turn to the Parsey or Lamb to cure the deficiencies of Fleischer as the rope structures of Parsey and Lamb are not similar or analogous to the claimed invention.
20. Parsey teaches a rope structure constructed from a core of at least one bundle of filaments, wherein the core may be bound by a steel tape or wire or sheathed with two organic coatings of different colors. In these configurations, damage or wear to the rope can be detected by measuring the resistance between the steel binding means or by a change in the color on the outside of the rope. See *Parsey* at col. 1, line 39 - col. 2, line 29. As used in Parsey, a bundle is used "to denote a group of filaments arranged in parallel fashion. Such a group may be assembled by combining together without twisting a number of filamentary yarns to produce the larger bundle required for a rope core." *Parsey*, col. 3, lines 50-55. Therefore, Parsey teaches a bundle or plurality of filaments that are sheathed, not a core comprised of a single yarn that is surrounded by a plurality of respective layers.
21. Lamb is directed to suspension ropes having polyurethane sheaths as used, for example, in an elevator assembly. *Parsey*, Col. 2, lines 26-28. As depicted in Figure 1a, the suspension or wire rope 4 is constructed from a wire rope that includes a **plurality of load supporting wire members or strands**. *Lamb*, col. 3, lines 16-20. In various embodiments, the wire rope in its entirety (which includes the plurality of wires or strands) is encased in sheaths of materials having differing properties where the properties of the sheath material are used to detect an amount or wear on the suspension rope. Therefore, Lamb teaches a plurality of wire members or strands that are sheathed, whereas the instant invention teaches a core comprised of a single yarn that is surrounded by a plurality of respective layers.
22. The structures and uses of Lamb and Parsey's rope structures are not similar or analogous to those of the claims, and an ordinarily skilled artisan would not turn to them for solutions.
23. The claims recite a multilayer filament having a core comprised of a single yarn surrounded by a plurality of respective layers that are used to indicate the level of wear of an industrial fabric constructed therefrom. Parsey, in contrast, is directed to a rope structure constructed from a core of at least one bundle of filaments, wherein

the core may be bound by a steel tape or wire or sheathed with two organic coatings of different colors. Lamb, in contrast, is directed to suspension ropes having polyurethane sheaths as used, for example, in an elevator assembly. Neither Parsey nor Lamb are within the field of an ordinarily skilled artisan's endeavor. Parsey relates to rope structures and Lamb relates to suspension ropes

24. Secondly, Parsey and Lamb are not reasonably pertinent to the particular problem with which the instant inventors were involved. As previously stated, Parsey relates to rope structures and Lamb relates suspension ropes. In contrast, the instant invention is directed to problems associated with wear of an industrial fabric, which is subject to wholly different kinds of stresses and wear, explained above, than those for ropes. Moreover, it is not a further product made from these ropes that needs wear detection, and indeed, these ropes are not woven or formed into another product at all. They are not yarns. It is clear that the matters with which Parsey and Lamb are concerned would **not** logically have commended themselves to an ordinarily skilled artisan's attention in considering any problem, including the problem to be solved by the instant invention.
25. The claimed structures are quite different than those of Lamb and Parsey. The claims are directed to filaments that are used to detect wear in an industrial fabric. In contrast, neither Parsey nor Lamb perform a function similar to detecting wear of an industrial fabric. Instead Parsey relates to detecting wear of rope structures comprised of bundles of filaments and Lamb relates to detecting wear of suspension ropes for use in, for example, elevator assemblies.
26. The Final Office Action denies that Parsey and Lamb are non-analogous art, despite the fact that each relates to rope structures, in particular marine water cordage and elevator suspension ropes, and neither of them teach or suggest use of a monofilament. One of ordinary skill in the papermaking art would not look to rope-making generally, or into elevator suspension ropes or marine water cordages specifically, to come up with a solution for wear in papermaking fabrics. A papermaking fabric is not similar to a rope.
27. At page 3, the Final Office Action states Parsey (at Col. 2, lines 8-29) and Lamb (at Col. 4, lines 20-35), "each disclose that it is known in the wear detecting art that a

core may be surrounded by a plurality of outer layers of different colors to indicate degree of wear.” Of course, neither of these references refer to nor even imply a “wear detecting art,” because there is no such thing. To the contrary, Parsey and Lamb are concerned with rope-making, and not industrial fabrics, and far less so papermaking fabrics (e.g., belts for papermaking machines). In particular, the references disclose sheathing (and re-sheathing) a rope to detect wear of a rope, not a yarn, and certainly not a monofilament. Thus the manner in which wear is detected on a sheathed rope is wholly different than the manner in which it is detected by the claimed yarns allow for wear detection of an industrial fabric. An ordinarily skilled artisan simply would not look to ropes – be they for elevators or marine cordage – as a material to make papermaking fabrics out of, or to seek solutions for problems associated with papermaking fabrics.

28. At page 5, the Final Office Action employs hindsight reasoning to supply a reason for its application of Fleischer, noting that “Applicant discloses that a means for monitoring wear on a papermaker’s fabric, and particularly at any point on its inner and outer surfaces, even when the paper machine is operating, would be very helpful to those in the papermaking industry.” No one denies that the claimed invention is very helpful to those in the papermaking industry. But, the Specification also explained that “[n]ormally, wear is monitored using a thickness gauge. However, it is difficult to measure the thickness of a papermaker’s fabric more than a foot or two in from its edges with such a gauge....” The Specification simply shows that the Applicant identified and provided a solution to the long-felt need of monitoring-wear that was inadequately met by prior art gauges. If anything, the prior art shows that the approaches taken before that disclosed were of a difference character (gauges).
29. For the reasons given above, an ordinarily skilled artisan would not consider that Fleischer, Parsey, Lamb, nor anything the Applicants’ own disclosure, alone or in combination, disclose or render obvious the above-recited limitations of independent claims 1, 15 and 48.
30. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true. These statements were made with

the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 3 February 2009

Jarvis L Davenport
NAME

APPENDIX III

RELATED PROCEEDINGS

None